(No Model.) 2 Sheets—Sheet 1.

C. V. RICHEY.

RAILROAD SWITCH.

No. 587,657. Patented Aug. 3, 1897.

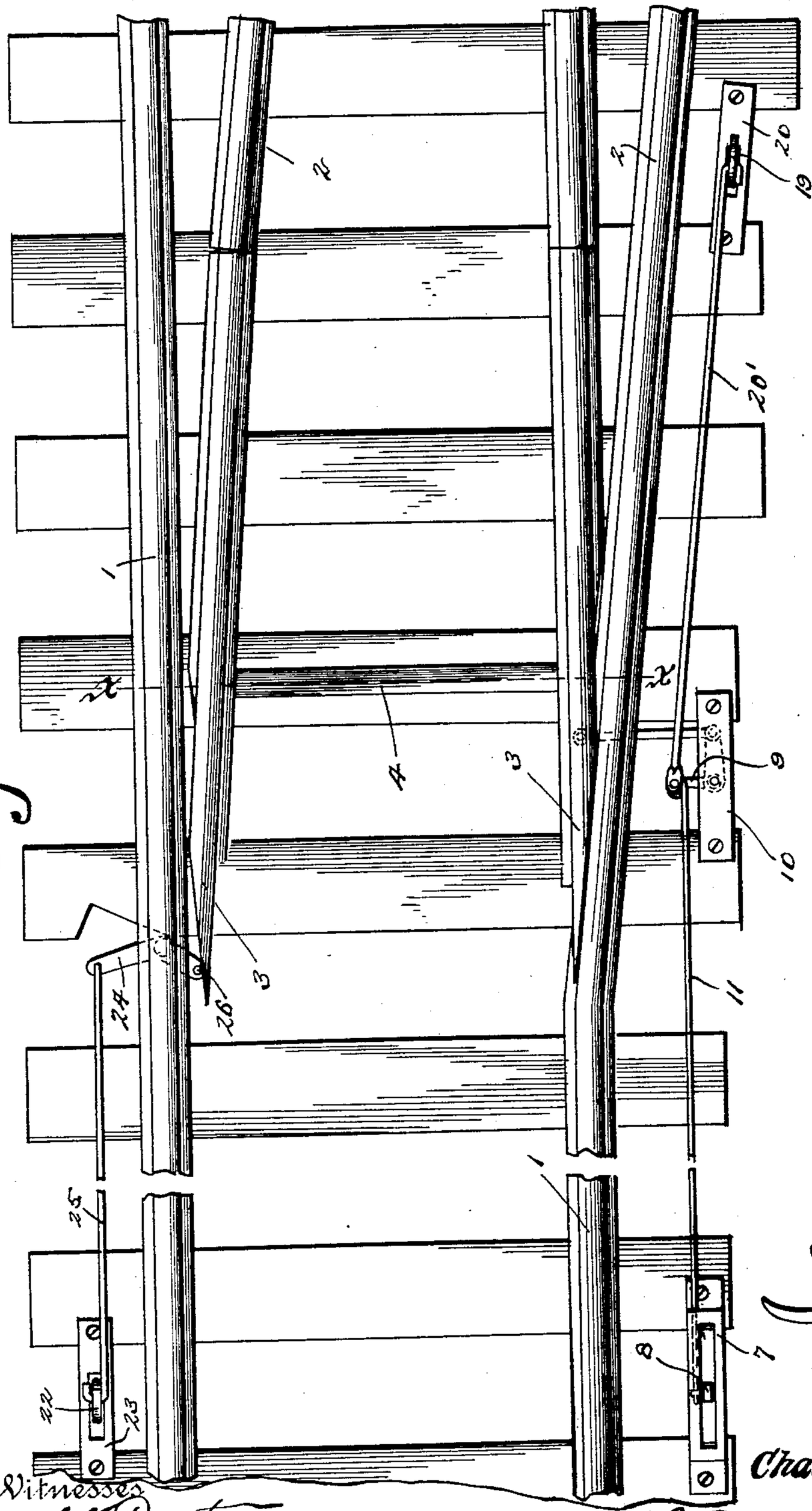

Fig. 1.

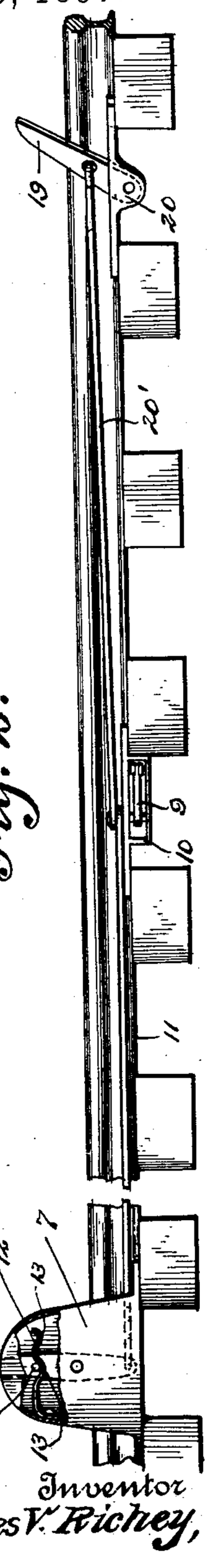

Fig. 2.

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(No Model.) 2 Sheets—Sheet 2.

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RAILROAD SWITCH.

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Fig. 3.

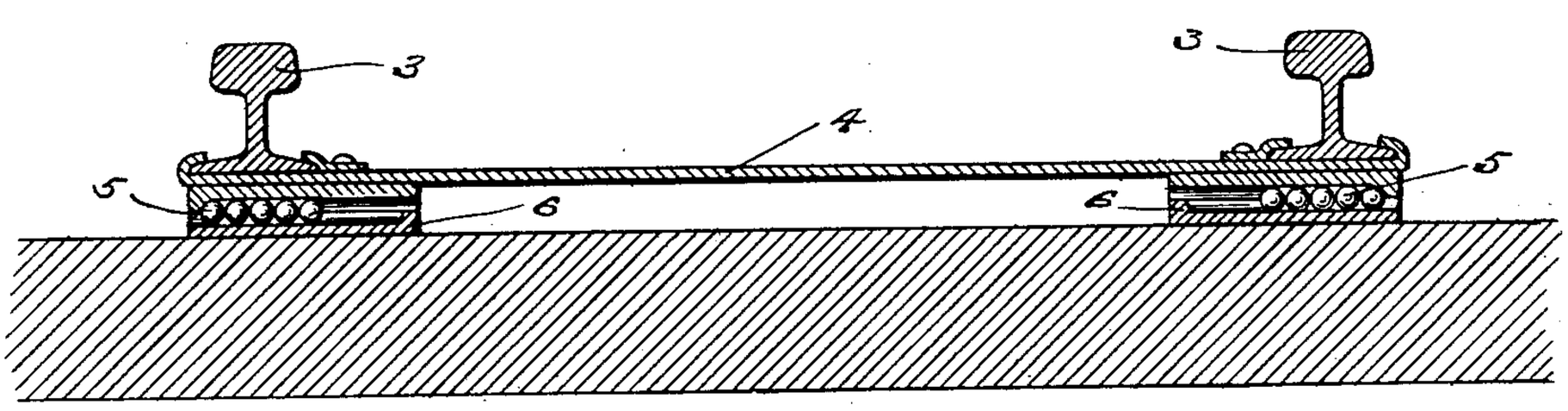


Fig. 4.

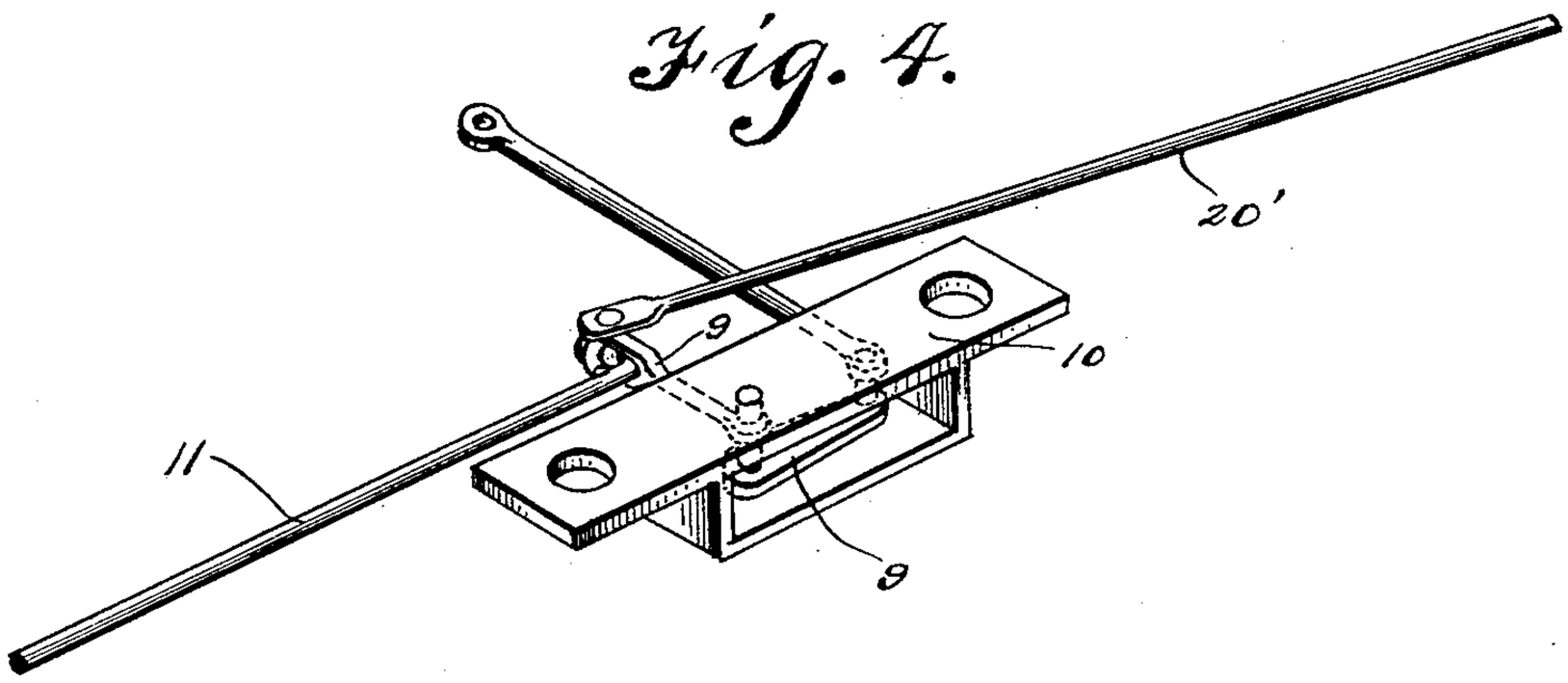


Fig. 5.

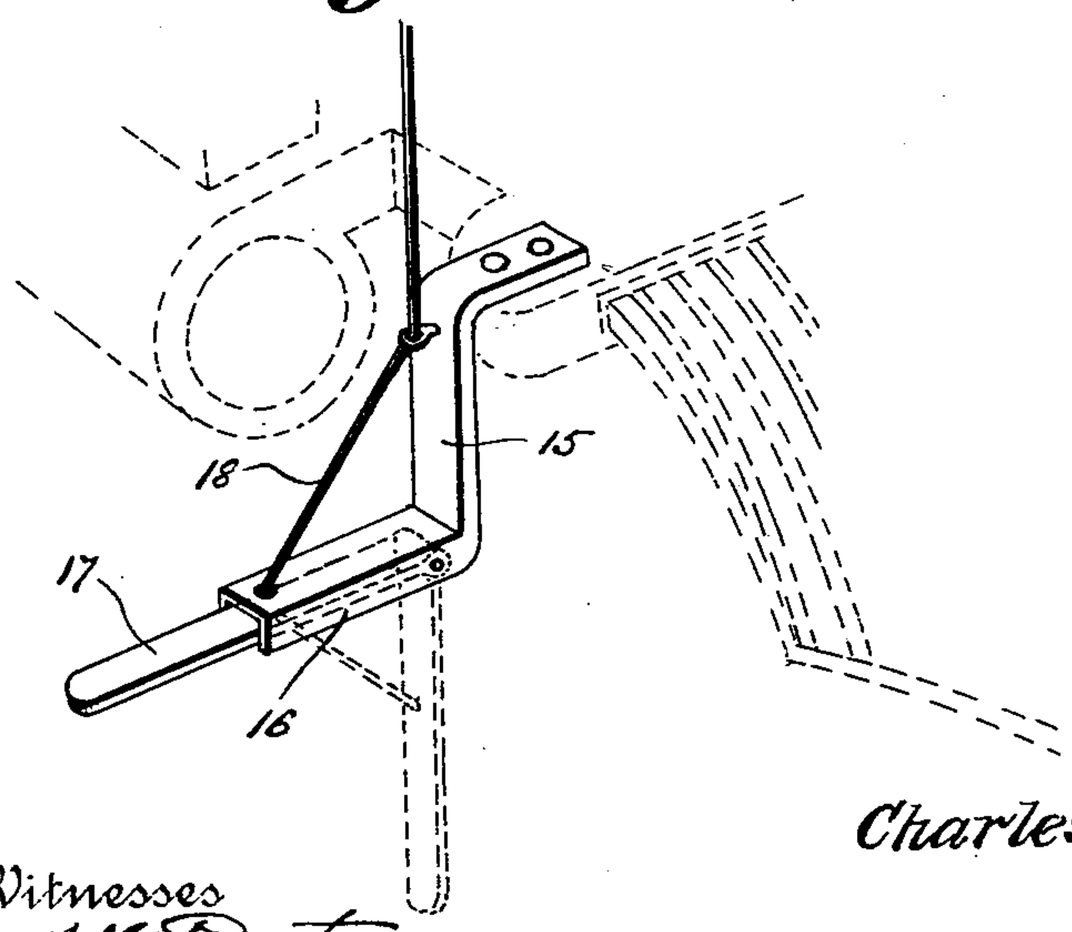
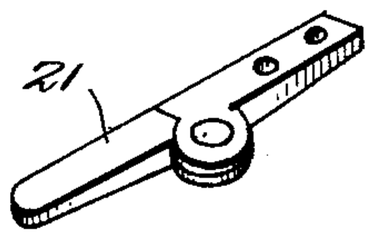


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES V. RICHEY, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF ONE-HALF TO LEONARD C. BAILEY, OF SAME PLACE.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 587,657, dated August 3, 1897.

Application filed June 11, 1897. Serial No. 640,381. (No model.)

To all whom it may concern:

Be it known that I, CHARLES V. RICHEY, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Railroad-Switches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to automatic railroad-switches; and it consists of certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a plan view of a section of a track, illustrating the application of my invention. Fig. 2 is a side view. Fig. 3 is a sectional view on the line $x\ x$ of Fig. 1. Fig. 4 is a detail perspective view of parts hereinafter to be described. Fig. 5 is a perspective view of the tripping-arm used to open the switch, showing it attached to an engine; and Fig. 6 is a similar view of the tripping-arm used to close the switch after the train has passed.

In said drawings, 1 denotes the rails of the main track, and 2 those of the switch.

3 denotes the switch-tongues, which are connected together by a bar 4, seated on antifriction-balls 5, located in casings 6, secured to one of the ties.

7 denotes a stand secured to the tie at a point adjacent to the free end of the switch-tongues. Pivoted to this stand is a trip-lever 8.

9 denotes a bell-crank lever pivoted in a bracket 10, secured to the ties near the switch-tongues. One limb of this bell-crank lever is connected to the trip by a pitman 11, while the other limb is connected to one of the switch-tongues, so that when said trip is actuated the switch-tongues will be correspondingly moved.

12 denotes a spring secured within the stand and provided with two recesses 13, adapted to be engaged by a pin 14, projecting laterally from the side of the trip, and by means of which the trip is prevented from being accidentally moved by the vibration of the track during the passage of a train.

15 denotes a bracket adapted to be secured to the front end of the locomotive and having at its lower end a bottomless box 16, to the rear end of which is pivoted an arm 17. 18 denotes a cord which is passed through an aperture in the box and connected to said arm and extends into the cab within convenient reach of the engineer. The switch-tongues being in the position shown in Fig. 1, and it is desired to enter the switch, the engineer draws upon the cord and raises the arm to the position shown in full lines in Fig. 5. When the arm strikes the trip, it will automatically open the switch.

To close the switch after the train has passed upon the switched track, I provide an arm 19, which is pivoted in brackets 20, secured to the tie. This arm is connected to a limb of the bell-crank lever by a link 20′, and is shorter than the trip 8, so that the arm 17 of the locomotive will not engage it and return the switch-tongue before the train has passed. A hinged arm 21 is secured to the rear end of the rear car of the train and projects laterally, and is adapted to engage said arm 19 and close the switch after the train has passed. This arm is shorter than the arm 17 and will not touch the trip 8.

In order to close the switch should the train back out therefrom, I provide a trip-arm 22, pivoted to a bracket 23 on the other side of the track and connected to a bell-crank lever 24 by a rod 25. This bell-crank lever 24 has a vertical pin 26, that engages the free end of one of the switch-tongues, whereby the tongues are thrown to close the switch when a train backs out.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a railroad-switch, the combination with the main track, of switch-tongues connected together and mounted upon antifriction-bearings, switch-stands, a trip-arm piv-

oted in the stand secured to the ties and provided with a pin adapted to engage the spring-catch, a bell-crank lever, a rod connecting one limb of the bell-crank lever to the trip, a link connecting one of the switch-tongues to the other end of the bell-crank lever, a pivoted arm that is arranged nearer the track than the trip aforesaid and is shorter than the same, a link connecting the arm to one of the limbs of the said bell-crank lever, a second bell-crank lever arranged on the opposite side of the track, and provided with a pin adapted to engage one of the switch-tongues and actuate the same, a trip-arm, and a link connecting the trip-arm with said bell-crank lever, substantially as set forth.

2. The combination with a locomotive, of a bracket secured thereto and provided with a bottomless box, an arm pivoted in said box, and a cord attached to said arm, passing through an aperture in said box and leading to the cab of the locomotive, substantially as set forth.

3. The combination with a locomotive, of a bracket secured thereto and provided with a bottomless box, an arm pivoted in said box, and means connected with said arm, and within convenient reach of the locomotive engineer, for actuating said arm, substantially as set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

CHARLES V. RICHEY.

Witnesses:
SAM. A. DRURY,
CLARENCE H. MAYER.